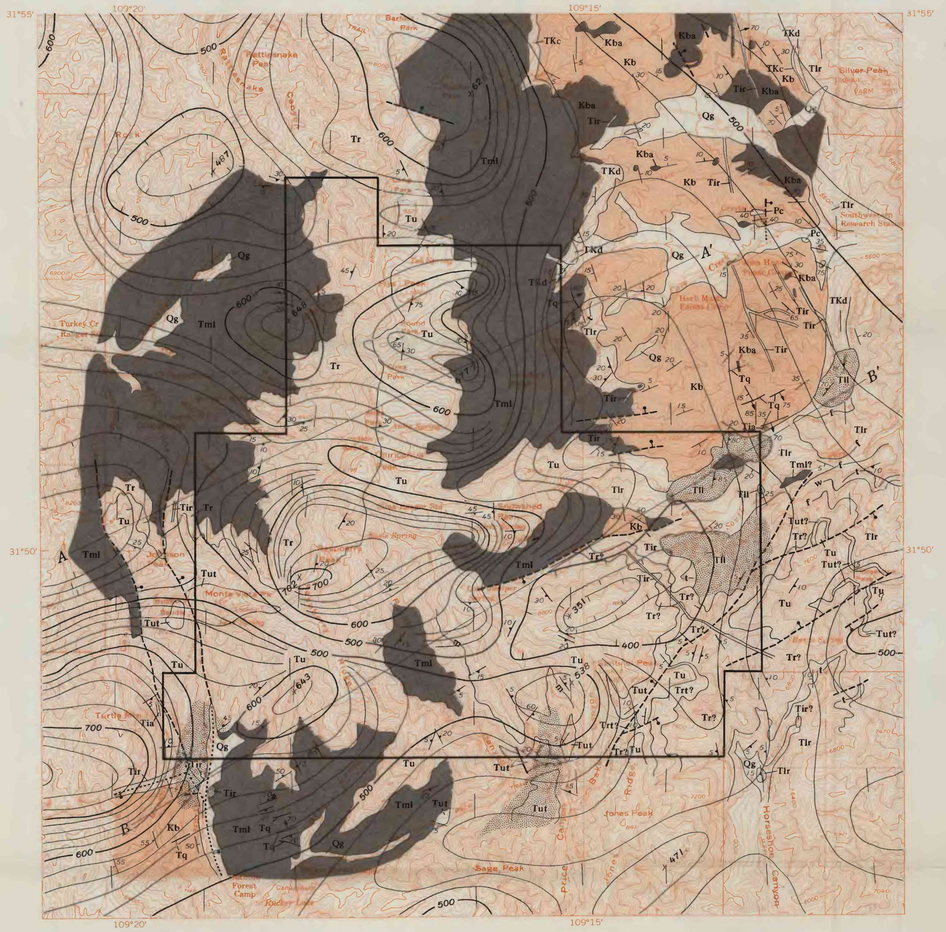
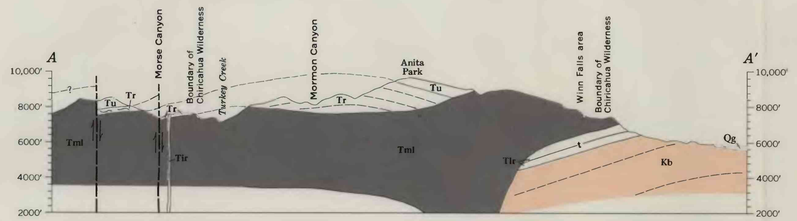
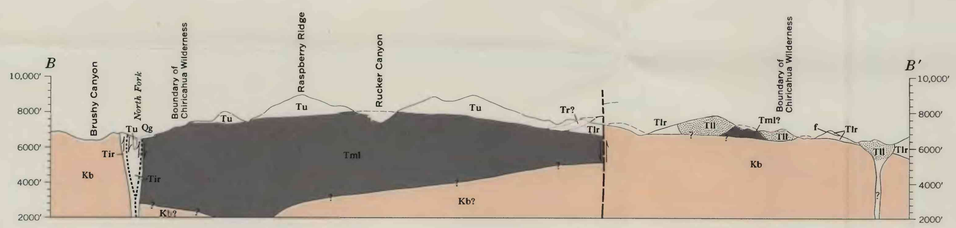


Base from U.S. Geological Survey, Chiricahua Peak and Portal, 1:62 500, 1958

Geology by Harald Drewes, 1971. Aeromagnetic survey compiled under supervision of G. P. Eaton, 1971; flown in 1970 at barometric elevation of 10,000 feet; flight-line spacing 1 mile





GEOLOGIC MAP OF THE CHIRICAHUA WILDERNESS AND VICINITY

CORRELATION OF MAP UNITS

Qg		QUATERNARY
Tc		QUATERNARY
Tia	Tq	Miocene — TERTIARY
Tir		Miocene — TERTIARY
Tu	Tut	Miocene — TERTIARY
m		Miocene — TERTIARY
Tml		Miocene — TERTIARY
Tr	Trt	Miocene — TERTIARY
Tlr	Tll	Miocene(?) and Oligocene — TERTIARY
f, w, t		Miocene(?) and Oligocene — TERTIARY
Tqj		TERTIARY OR CRETACEOUS
TKc	TKd	TERTIARY OR CRETACEOUS
Kb	Kba	CRETACEOUS
Pzu	Pc	PERMIAN — PALEOZOIC
p€q		PRECAMBRIAN

DESCRIPTION OF MAP UNITS

Qg — GRAVEL (QUATERNARY) – Alluvial terrace deposits. Includes sand in the upper Pinery Canyon area and in the Paradise-Galeyville area

Tc — CONGLOMERATE (TERTIARY)

Tia — DIKES (MIOCENE) – Showing dip
Intrusive andesite porphyry

Tir — Intrusive rhyolite – Includes porphyritic and nonporphyritic body 2 miles northwest of Turkey Creek Ranger Station that is dated by the potassium-argon method as 24.8 m.y. (Marjaniemi, 1969)

Tq — QUARTZ VEINS (MIOCENE) – Showing dip

Tu — UPPER RHYOLITE (MIOCENE):
Rhyolite lava – Sparsely porphyritic, massive to faintly flow laminated; includes some vitrophyre and small bodies of tuffaceous rock

m — Base of a massive lava flow – East of the upper part of Rucker Canyon

Tut — Tuffaceous rock – Large bodies

Tml — MONZONITE AND LATITE (MIOCENE) – Intrusive and extrusive rocks. Mainly monzonite in core of the western body in the wilderness and porphyritic latite elsewhere. In the Upper Pinery Canyon area, include some rhyolite volcanic rocks

Tr — RHYOLITE CANYON FORMATION (MIOCENE):
Porphyritic rhyolite welded tuff – Dated as 24.2-25.0 m.y. by 3 potassium-argon determinations (Marjaniemi, 1969)

Trt — Tuff and tuff breccia

Tlr — LOWER RHYOLITE (MIOCENE? AND OLIGOCENE):
Porphyritic rhyolite tuff, welded tuff, and lava flows, and some dacitic lava flows – Tuffaceous rhyolite dominant within the wilderness. Dated by potassium-argon method as 25.7 ± 0.8 m.y. (Marjaniemi, 1969)

f — Base of rhyolite flows

w — Base of welded tuff

t — Base of tuffaceous beds

Tll — Flow-laminated rhyolite – May include some intrusive rock and may include rock as young as the upper rhyolite (Tu)

Tqj — QUARTZ MONZONITE (TERTIARY) – Jhus stock. 30.9 ± 1 m.y.

TKc — DACITIC ROCKS (TERTIARY OR CRETACEOUS):
Conglomerate – Contains much dacitic detritus

TKd — Dacitic volcanic rocks – Include some conglomerate in the Paradise-Galeyville area

Kb — BISBEE FORMATION (LOWER CRETACEOUS):
Interbedded shale, siltstone, and sandstone – Mostly olive brown to black; include some limestone and epiclastic, extrusive, and dacitic volcanic rocks in upper part and some conglomerate near base of formation. May include some younger bedded rocks in the upper Pinery Canyon area and in the Paradise-Galeyville area

Kba — Andesitic volcanic rocks – May include some younger rocks

Pc — CONCHA LIMESTONE (PERMIAN) – Cherty and fossiliferous limestone, locally intensively silicified

Pzu — PALEOZOIC ROCKS UNDIFFERENTIATED – Sequence extends from Permian Concha Limestone to Cambrian Bolsa Quartzite. Rocks near Galeyville and Paradise are metamorphosed

pCq — GRANODIORITE AND QUARTZ MONZONITE (PRECAMBRIAN)

CONTACT – Approximately located

FAULT – Dashed where inferred; dotted where concealed or intruded. Bar and ball on downthrow side

STRIKE AND DIP OF BEDS

STRIKE AND DIP OF FOLIATION

ALTERED ROCK – Area of widespread reddish-brown iron-stained rock

PROSPECT – Includes mines in the Paradise-Galeyville area

ADIT

500 — MAGNETIC CONTOURS – Showing total intensity of earth's magnetic field in gammas relative to arbitrary datum. Hachured to indicate closed areas of lower magnetic intensity. Contour interval 20 gammas

LOCATION OF MEASURED MAXIMUM OR MINIMUM INTENSITY WITHIN CLOSED HIGH OR CLOSED LOW

FLIGHTPATH – Showing location and spacing of aeromagnetic data

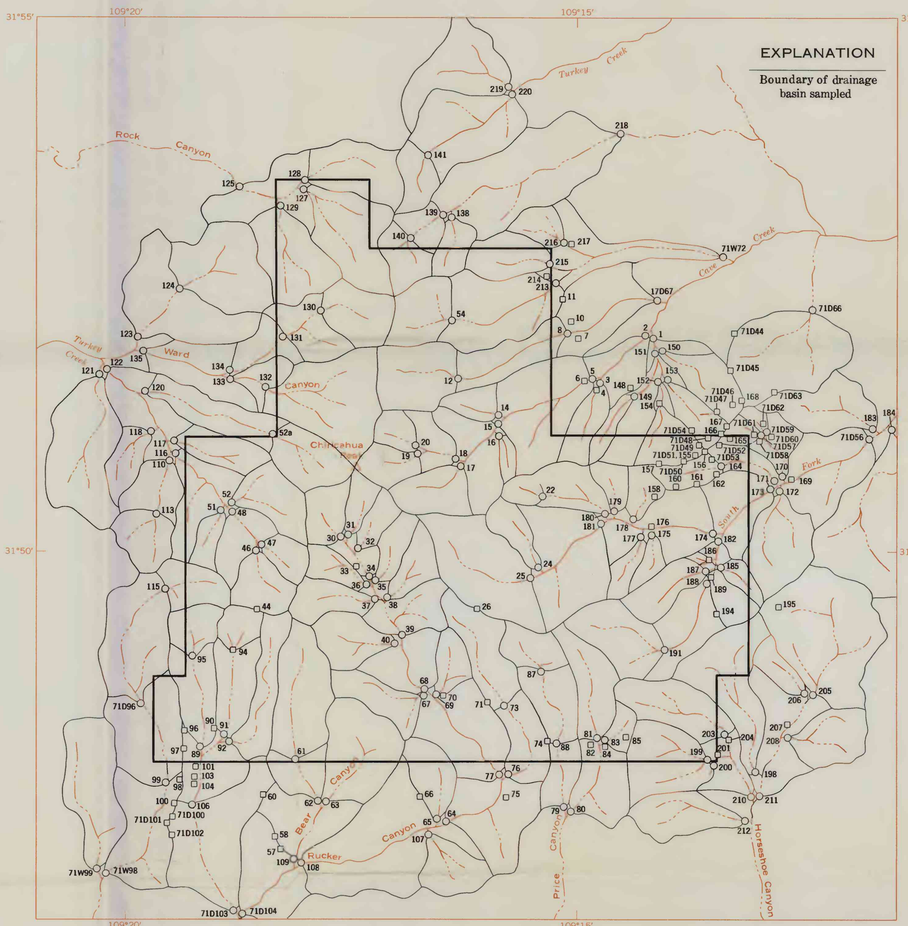
SAMPLE SITE – Numbers of samples collected in 1970 are shortened; thus, full number of sample 26 is 70D26. On the map of the upper Pinery Canyon area, the number without parentheses is of the youngest alluvium, and the number in parentheses is of alluvium in low terrace deposits

64 — Sample of geochemically analyzed alluvium

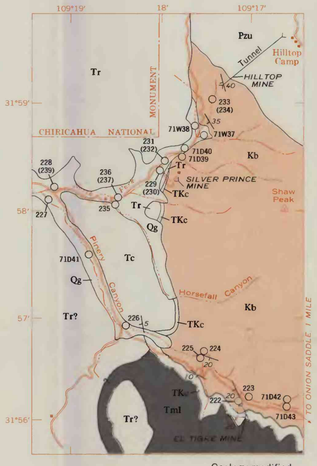
66 — Rock sample – On sample-locality map only

68D39 — SAMPLE SITE OF RADIOMETRICALLY DATED ROCK – On Paradise-Galeyville map only

BOUNDARY OF CHIRICAHUA WILDERNESS

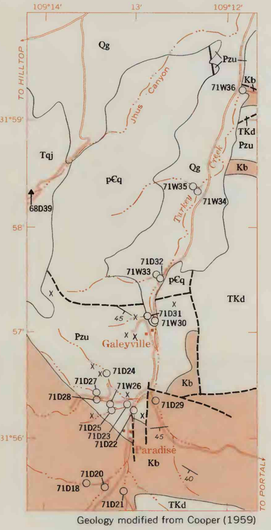


SAMPLE–LOCALITY MAP, CHIRICAHUA WILDERNESS AND VICINITY



Geology modified from Cooper (1959)

GEOLOGIC MAP OF UPPER PINERY CANYON AREA



Geology modified from Cooper (1959)

GEOLOGIC MAP OF THE PARADISE–GALEYVILLE AREA

12½° APPROXIMATE MEAN DECLINATION, 1974 (TRUE NORTH / MAGNETIC NORTH)

SCALE 1:62 500

1 ½ 0 1 2 3 4 MILES

1 .5 0 1 2 3 4 KILOMETERS

CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL

MINERAL RESOURCES OF THE CHIRICAHUA WILDERNESS AREA, COCHISE COUNTY, ARIZONA

* U.S. GOVERNMENT PRINTING OFFICE: 1973 O—543–576/20